

WHAT IS CLAIMED IS:

1. A spine filling device comprising:

a flexible and permeable filling member formed of one or more meshed walls and provided with a holding portion and an injection port in communication with said holding portion, said meshed walls being elastically compressible and a single-layer wall or a laminated multi-layer wall, and each layer of which is provided with a plurality of pores, each having a diameter smaller than 0.1 mm, so that said meshed walls are not air-tight; and

a pasty medicine capable of solidification injected into said holding portion via said injection port of said filling member,

wherein said injection of said pasty medicine into said holding portion results in expansion of said filling member after said filling member being implanted in a spinal segment or intervertebral space, whereby said filling member is securely lodged in the spinal segment or intervertebral space upon completion of the solidification of said pasty medicine.

2. A method for treating a spinal disorder comprising:

implanting a flexible and permeable filling member a spinal segment or intervertebral space, which is formed of one or more meshed walls and provided with a holding portion and an injection port in communication with said holding portion, said meshed walls being elastically compressible and a single-layer wall or a laminated multi-layer wall, and each layer of which is provided with a plurality of pores, each having a diameter smaller than 0.1 mm, so that said meshed walls are not air-tight; and

1 injecting a pasty medicine capable of solidification into said
2 holding portion via said injection port of said filling member,
3 wherein said injection of said pasty medicine into said holding
4 portion results in expansion of said filling member after said filling member
5 being implanted in the intervertebral space, whereby said filling member is
6 securely lodged in the intervertebral space upon completion of the
7 solidification of said pasty medicine.
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9 3. The spine filling device as defined in claim 1, wherein said
10 meshed walls are of a single-layer wall construction.
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12 4. The spine filling device as defined in claim 1, wherein said
13 meshed walls are of a laminated multi-layer wall construction.
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15 5. The spine filling device as defined in claim 1, wherein said
16 filling member is integrally made of one meshed wall such that said filling
17 member takes the form of a sac, bag, or ball.
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19 6. The spine filling device as defined in claim 1, wherein said
20 pasty medicine is a mixture of a liquid and a bone cement.
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22 7. The spine filling device as defined in claim 6, wherein said
23 bone cement is selected from the group consisting of gypsum, calcium
24 sulfate, calcium phosphate, poly(methylmethacrylate) and hydroxy apatite.
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1 8. The spine filling device as defined in claim 1 further
2 comprising an injection tool fastened detachably with said filling member,
3 so that said pasty medicine is injected into said holding portion via said
4 injection tool.

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6 9. The spine filling device as defined in claim 8, wherein said
7 injection tool comprises a connection tube and a syringe formed of a
8 barrel and a plunger, said connection tube being fastened detachably at
9 one end with said injection port of said filling member, said connection
10 tube further being fastened at other end with said barrel of said syringe;
11 wherein said pasty medicine is injected into said holding portion of said
12 filling member from said barrel by said plunger via said connection tube.

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14 10. The method as defined in claim 2, wherein said meshed
15 walls are of a single-layer wall construction.

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17 11. The method as defined in claim 2, wherein said meshed
18 walls are of a laminated multi-layer wall construction.

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20 12. The method as defined in claim 2, wherein said filling
21 member is integrally made of one meshed wall such that said filling
22 member takes the form of a sac, bag, or ball.

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24 13. The method as defined in claim 2, wherein said pasty
25 medicine is a mixture of a liquid and a bone cement.

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1 14. The method as defined in claim 13, wherein said bone
2 cement is selected from the group consisting of gypsum, calcium sulfate,
3 calcium phosphate, poly(methylmethacrylate) and hydroxy apatite.

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5 15. The method as defined in claim 2 further comprising
6 fastening detachably an injection tool with said filling member, so that said
7 pasty medicine is injected into said holding portion via said injection tool.

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9 16. The method as defined in claim 15, wherein said injection
10 tool comprises a connection tube and a syringe formed of a barrel and a
11 plunger, said connection tube being fastened detachably at one end with
12 said injection port of said filling member, said connection tube further
13 being fastened at other end with said barrel of said syringe; wherein said
14 pasty medicine is injected into said holding portion of said filling member
15 from said barrel by said plunger via said connection tube.

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